Response to the letter

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Letter to the editor

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To: Editor, The Angle Orthodontist

Re: Response to: Mini-implant supported canine retraction with micro-osteoperforation: A split- mouth randomized clinical trial. Saritha Sivarajan, Jennifer Geraldine Doss, Spyridon N. Papageorgiou, Martyn T. Cobourne, Mang Chek Wey. The Angle Orthodontist. 2019; 89: 183-189.

We thank our colleagues for their thoughtful remarks.

Sliding mechanics were used in our study design because the intention was to simulate a clinical situation that is commonly employed. We used a split-mouth design whereby any resistance to sliding would have affected both the control and experimental sides. As our colleague mentioned, mechanical con- founding factors would have handicapped the biological factors with or without MOP, but the split-mouth design would be expected to distribute the confounding factors equally. However, it would be interesting to conduct a similar investigation using frictionless mechanics.

As far as distribution of these data are concerned, we would first point out that both the outcomes of orthodontic pain and canine retraction were normally distributed. This was confirmed in the study analysis and prompted the use of appropriate descriptive statistics. Second, for the one-way analysis of variance (as for regression models) the assumption states that you need not have normality of the original variable, but a normal distribution of the residuals; these are different things. Third, it is important to note that even when we talk about normality of the data, we are talking about normality of the response variable (pain or retraction rate) of the whole sample and not of each separate group (and assuming proper sampling and common measurement procedures, expect uniformity of the groups). So, the actual n that was implied here was not 10, but 30 patients. Finally, we would highlight that large standard deviations are indicative of high dispersion around the mean, but are not per se indicative of a non-normal distribution. We do nevertheless, fully acknowledge the trial's restricted sample as a limitation affecting its conclusions and believe this investigation is a first, but not necessarily conclusive, step in answering this specific research question.